

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: KREIDER, BRENT L.
RUBEN, STEVEN M.
OLSEN, HENRIK S.
- (ii) TITLE OF INVENTION: CHEMOKINE β -6 ANTAGONISTS
- (iii) NUMBER OF SEQUENCES: 114
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
 - (B) STREET: 1100 NEW YORK AVENUE, SUITE 600
 - (C) CITY: WASHINGTON
 - (D) STATE: DC
 - (E) COUNTRY: USA
 - (F) ZIP: 20005-3934
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: To be assigned
 - (B) FILING DATE: Herewith
 - (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 60/042,269
 - (B) FILING DATE: 31-MAR-1997
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: STEFFE, ERIC K
 - (B) REGISTRATION NUMBER: 36,688
 - (C) REFERENCE/DOCKET NUMBER: 1488.0340004
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 202-371-2600
 - (B) TELEFAX: 202-371-2540

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 360 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (ix) FEATURE:
 - (A) NAME/KEY: CDS
 - (B) LOCATION: 1..357
- (ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 1..79

(ix) FEATURE:

(A) NAME/KEY: mat_peptide
(B) LOCATION: 79..357

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

ATG GCA GGC CTG ATG ACC ATA GTA ACC AGC CTT CTG TTC CTT GGT GTC	48
Met Ala Gly Leu Met Thr Ile Val Thr Ser Leu Leu Phe Leu Gly Val	
-26 -25 -20 -15	
TGT GCC CAC CAC ATC ATC CCT ACG GGC TCT GTG GTC ATA CCC TCT CCC	96
Cys Ala His His Ile Ile Pro Thr Gly Ser Val Val Ile Pro Ser Pro	
-10 -5 1 5	
TGC TGC ATG TTC TTT GTT TCC AAG AGA ATT CCT GAG AAC CGA GTG GTC	144
Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn Arg Val Val	
10 15 20	
AGC TAC CAG CTG TCC AGC AGG AGC ACA TGC CTC AAG GCA GGA GTG ATC	192
Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala Gly Val Ile	
25 30 35	
TTC ACC ACC AAG AAG GGC CAG CAG TTC TGT GGC GAC CCC AAG CAG GAG	240
Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro Lys Gln Glu	
40 45 50	
TGG GTC CAG AGG TAC ATG AAG AAC CTG GAC GCC AAG CAG AAG AAG GCT	288
Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln Lys Lys Ala	
55 60 65 70	
TCC CCT AGG GCC AGG GCA GTG GCT GTC AAG GGC CCT GTC CAG AGA TAT	336
Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val Gln Arg Tyr	
75 80 85	
CCT GGC AAC CAA ACC ACC TGC TAA	360
Pro Gly Asn Gln Thr Thr Cys	
90	

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 119 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Met Ala Gly Leu Met Thr Ile Val Thr Ser Leu Leu Phe Leu Gly Val
-26 -25 -20 -15
Cys Ala His His Ile Ile Pro Thr Gly Ser Val Val Ile Pro Ser Pro
-10 -5 1 5

Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn Arg Val Val
10 15 20
Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala Gly Val Ile
25 30 35
Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro Lys Gln Glu
40 45 50
Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln Lys Lys Ala
55 60 65 70
Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val Gln Arg Tyr
75 80 85
Pro Gly Asn Gln Thr Thr Cys
90

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

TCAGGATCCC CTACGGGCTC GTGGTC

26

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TGACCGGCAG CAAAATGAGA TCTCGC

26

(2) INFORMATION FOR SEQ ID NO:5:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 99 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Met	Lys	Val	Ser	Ala	Ala	Leu	Leu	Cys	Leu	Leu	Leu	Ile	Ala	Ala	Thr	
1				5					10					15		
Phe	Ile	Pro	Gln	Gly	Leu	Ala	Gln	Pro	Asp	Ala	Ile	Asn	Ala	Pro	Val	
			20					25					30			
Thr	Cys	Cys	Tyr	Asn	Phe	Thr	Asn	Arg	Lys	Ile	Ser	Val	Gln	Arg	Leu	
		35					40					45				
Ala	Ser	Tyr	Arg	Arg	Ile	Thr	Ser	Ser	Lys	Cys	Pro	Lys	Glu	Ala	Val	
		50				55					60					
Ile	Phe	Lys	Thr	Ile	Val	Ala	Lys	Glu	Ile	Cys	Ala	Asp	Pro	Lys	Gln	
65				70						75					80	
Lys	Trp	Val	Gln	Asp	Ser	Met	Asp	His	Leu	Asp	Lys	Gln	Thr	Gln	Thr	
			85						90					95		
Pro Lys Thr																

(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 285 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

ATGGTGTTA	TACCTTCTCC	GTGCTGCATG	TTCTTTGTTA	GCAAGCGCAT	TCCTGAAAAC	60
CGTGTGGTCA	GCTACCAGCT	GTCCAGCCGC	AGCACCTGCC	TGAAAGCTGG	CGTGATCTTC	120
ACCACCAAAA	AGGGCCAGCA	GTTCTGTGGC	GACCCGAAAC	AAGAGTGGGT	CCAGCGTTAC	180
ATGAAAAACC	TGGACGCCAA	ACAGAAGAAA	GCTTCCCCTC	GTGCCC CGCG	AGTGGCTGTC	240
AAAGGCCCTG	TTCAGCGTTA	TCCGGGCAAC	CAAACCACT	GCTAA		285

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 96 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GACTCCATGG TGGTTATACC TTCTCCGTGC TGCATGTTCT TTGTTAGCAA GCGCATTCCT 60

GAAAACCGTG TGGTCAGCTA CCAGCTGTCC AGCCGC 96

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 97 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GTTTCGGGTC GCCACAGAAC TGCTGGCCCT TTTTGGTGGT GAAGATCAGG CCAGCTTTCA 60

GGCAGGTGCT GCGGCTGGAC AGCTGGTAGC TGACCAC 97

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 98 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

AAGGGCCAGC AGTTCTGTGG CGACCCGAAA CAAGAGTGGG TCCAGCGTTA CATGAAAAAC 60

CTGGACGCCA AACAGAAGAA AGCTTCCCCT CGTGCCCC 98

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 99 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

AGTCAGATCT TTAGCAGGCG GTTTGGTTGC CCGGATAACG CTGAACAGGG CCTTTGACAG 60

CCACTGCGCG GGCACGAGGG GAAGCTTTCT TCTGTTTG 99

(2) INFORMATION FOR SEQ ID NO:11:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 34 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GACGGATCCC CATATGGTGG TTATACCTTC TCCG

34

(2) INFORMATION FOR SEQ ID NO:12:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 32 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GACTGGTACC TTAGCAGGTG GTTTGGTTGC CC

32

(2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

GACTGGTACC TTATCAACGA GGGGAAGCTT TCTTCT

36

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 37 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

GACTGGTACC CTATCAAGCC ACTGCGCGGG CACGAGG

37

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

GACTCATATG GTTATACCTT CTCCGTGCTG CATG

34

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

GACTCATATG ATACCTTCTC CGTGCTGCAT G

31

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

GACTCATATG CCTTCTCCGT GCTGCATGTT C

31

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

GACTCATATG TCTCCGTGCT GCATGTTCTT TG

32

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 29 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

GACTCATATG CCGTGCTGCA TGTTCCTTG

29

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

GACTCATATG TGCTGCATGT TCTTTGTTAG

30

(2) INFORMATION FOR SEQ ID NO:21:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 4256 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

AAGCTTAAAA AACTGCAAAA AATAGTTTGA CTTGTGAGCG GATAACAATT AAGATGTACC

60

CAATTGTGAG CGGATAACAA TTTCACACAT TAAAGAGGAG AAATTACATA TGGTGGTTAT	120
ACCTTCTCCG TGCTGCATGT TCTTTGTTAG CAAGCGCATT CCTGAAAACC GTGTGGTCAG	180
CTACCAGCTG TCCAGCCGCA GCACCTGCCT GAAAGCTGGC GTGATCTTCA CCACCAAAAA	240
GGGCCAGCAG TTCTGTGGCG ACCCGAAACA AGAGTGGGTC CAGCGTTACA TGAAAAACCT	300
GGACGCCAAA CAGAAGAAAG CTTCCTCTCG TGCCCGCGCA GTGGCTGTCA AAGGCCCTGT	360
TCAGCGTTAT CCGGGCAACC AAACCACCTG CTAAGGTACC TAAGTGAGTA GGGCGTCCGA	420
TCGACGGACG CCTTTTTTTT GAATTCGTAA TCATGGTCAT AGCTGTTTCC TGTGTGAAAT	480
TGTTATCCGC TCACAATTCC ACACAACATA CGAGCCGAA GCATAAAGTG TAAAGCCTGG	540
GGTGCCTAAT GAGTGAGCTA ACTCACATTA ATTGCGTTGC GCTCACTGCC CGCTTTCCAG	600
TCGGGAAACC TGTCGTGCCA GCTGCATTAA TGAATCGGCC AACGCGCGGG GAGAGGCGGT	660
TTGCGTATTG GGCGCTCTTC CGCTTCCTCG CTCACTGACT CGCTGCGCTC GGTCGTTCCG	720
CTGCGGCGAG CGGTATCAGC TCACTCAAAG GCGGTAATAC GGTATCCAC AGAATCAGGG	780
GATAACGCAG GAAAGAACAT GTGAGCAAAA GGCCAGCAA AGGCCAGGAA CCGTAAAAAG	840
GCCGCGTTGC TGGCGTTTTT CCATAGGCTC CGCCCCCTG ACGAGCATCA CAAAAATCGA	900
CGCTCAAGTC AGAGGTGGCG AAACCCGACA GGACTATAAA GATACCAGGC GTTTCCCCCT	960
GGAAGCTCCC TCGTGCGCTC TCCTGTTCG ACCCTGCCGC TTACCGGATA CCTGTCCGCC	1020
TTTCTCCCTT CGGGAAGCGT GGCGCTTTCT CATAGCTCAC GCTGTAGGTA TCTCAGTTCG	1080
GTGTAGGTCG TTCGCTCCAA GCTGGGCTGT GTGCACGAAC CCCCCGTTCA GCCCGACCGC	1140
TGCGCCTTAT CCGGTAAC TAAGTCTGAG TCCAACCCGG TAAGACACGA CTTATCGCCA	1200
CTGGCAGCAG CCACTGGTAA CAGGATTAGC AGAGCGAGGT ATGTAGGCGG TGCTACAGAG	1260
TTCTTGAAGT GGTGGCCTAA CTACGGCTAC ACTAGAAGAA CAGTATTTGG TATCTGCGCT	1320
CTGCTGAAGC CAGTTACCTT CGGAAAAAGA GTTGGTAGCT CTTGATCCGG CAAACAAACC	1380
ACCGCTGGTA GCGGTGGTTT TTTTGTTCG AAGCAGCAGA TTACGCGCAG AAAAAAAGGA	1440
TCTCAAGAAG ATCCTTTGAT CTTTCTACG GGGTCTGACG CTCAGTGGAA CGAAACTCA	1500
CGTTAAGGGA TTTTGGTCAT GAGATTATCG TCGACAATTC GCGCGCGAAG GCGAAGCGGC	1560
ATGCATTAC GTTGACACCA TCGAATGGTG CAAAACCTTT CGCGGTATGG CATGATAGCG	1620
CCCGGAAGAG AGTCAATTCA GGGTGGTGAA TGTGAAACCA GTAACGTTAT ACGATGTCGC	1680
AGAGTATGCC GGTGTCTCTT ATCAGACCGT TTCCCGCGTG GTGAACCAGG CCAGCCACGT	1740
TTCTGCGAAA ACGCGGGAAA AAGTGGAAGC GGCGATGGCG GAGCTGAATT ACATTCCCAA	1800
CCGCGTGGCA CAACAACTGG CGGGCAAACA GTCGTTGCTG ATTGGCGTTG CCACCTCCAG	1860
TCTGGCCCTG CACGCGCCGT CGCAAATTGT CGCGGCGATT AAATCTCGCG CCGATCAACT	1920

GGGTGCCAGC GTGGTGGTGT CGATGGTAGA ACGAAGCGGC GTCGAAGCCT GTAAAGCGGC	1980
GGTGCACAAT CTTCTCGCGC AACGCGTCAG TGGGCTGATC ATTAACTATC CGCTGGATGA	2040
CCAGGATGCC ATTGCTGTGG AAGCTGCCTG CACTAATGTT CCGGCGTTAT TTCTTGATGT	2100
CTCTGACCAG ACACCCATCA ACAGTATTAT TTTCTCCCAT GAAGACGGTA CGCGACTGGG	2160
CGTGGAGCAT CTGGTCGCAT TGGGTCACCA GCAAATCGCG CTGTTAGCGG GCCCATTAAG	2220
TTCTGTCTCG GCGCGTCTGC GTCTGGCTGG CTGGCATAAA TATCTCACTC GCAATCAAAAT	2280
TCAGCCGATA GCGGAACGGG AAGGCGACTG GAGTGCCATG TCCGGTTTTT AACAAACCAT	2340
GCAAATGCTG AATGAGGGCA TC GTTCCCAC TGCGATGCTG GTTGCCAACG ATCAGATGGC	2400
GCTGGGCGCA ATGCGCGCCA TTACCGAGTC CGGGCTGCGC GTTGGTGCGG ATATCTCGGT	2460
AGTGGGATAC GACGATACCG AAGACAGCTC ATGTTATATC CCGCCGTTAA CCACCATCAA	2520
ACAGGATTTT CGCCTGCTGG GGCAAACCAG CGTGGACCGC TTGCTGCAAC TCTCTCAGGG	2580
CCAGGCGGTG AAGGGCAATC AGCTGTTGCC CGTCTCACTG GTGAAAAGAA AAACCACCCT	2640
GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GATTCATTAA TGCAGCTGGC	2700
ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT GTAAGTTAGC	2760
GCGAATTGTC GACCAAAGCG GCCATCGTGC CTCCCCACTC CTGCAGTTTCG GGGGCATGGA	2820
TGCGCGGATA GCCGCTGCTG GTTTCCTGGA TGCCGACGGA TTTGCACTGC CGGTAGAACT	2880
CCGCGAGGTC GTCCAGCCTC AGGCAGCAGC TGAACCAACT CGCGAGGGGA TCGAGCCCGG	2940
GGTGGGCGAA GAACTCCAGC ATGAGATCCC CGCGCTGGAG GATCATCCAG CCGGCGTCCC	3000
GGAAAACGAT TCCGAAGCCC AACCTTTCAT AGAAGGCGGC GGTGGAATCG AAATCTCGTG	3060
ATGGCAGGTT GGGCGTCGCT TGGTCGGTCA TTTCGAACCC CAGAGTCCCG CTCAGAAGAA	3120
CTCGTCAAGA AGGCGATAGA AGGCGATGCG CTGCGAATCG GGAGCGGCGA TACCGTAAAG	3180
CACGAGGAAG CGGTCAGCCC ATTCGCCGCC AAGCTCTTCA GCAATATCAC GGGTAGCCAA	3240
CGCTATGTCC TGATAGCGGT CCGCCACACC CAGCCGGCCA CAGTCGATGA ATCCAGAAAA	3300
GCGGCCATTT TCCACCATGA TATTGGCAA GCAGGCATCG CCATGGGTCA CGACGAGATC	3360
CTCGCCGTCG GGCATGCGCG CCTTGAGCCT GGCGAACAGT TCGGCTGGCG CGAGCCCCTG	3420
ATGCTCTTCG TCCAGATCAT CCTGATCGAC AAGACCGGCT TCCATCCGAG TACGTGCTCG	3480
CTCGATGCGA TGTTTCGCTT GGTGGTCGAA TGGGCAGGTA GCCGGATCAA GCGTATGCAG	3540
CCGCCGCATT GCATCAGCCA TGATGGATAC TTTCTCGGCA GGAGCAAGGT GAGATGACAG	3600
GAGATCCTGC CCCGGCACTT CGCCCAATAG CAGCCAGTCC CTTCCCGCTT CAGTGACAAC	3660
GTCGAGCACA GCTGCGCAAG GAACGCCCGT CGTGGCCAGC CACGATAGCC GCGCTGCCTC	3720
GTCCTGCAGT TCATTAGGG CACCGGACAG GTCGGTCTTG AAAAAAGAA CCGGGCGCCC	3780

CTGCGCTGAC AGCCGGAACA CGGCGGCATC AGAGCAGCCG ATTGTCTGTT GTGCCCAGTC 3840
 ATAGCCGAAT AGCCTCTCCA CCCAAGCGGC CGGAGAACCT GCGTGCAATC CATCTTGTTT 3900
 AATCATGCGA AACGATCCTC ATCCTGTCTC TTGATCAGAT CTTGATCCCC TGCGCCATCA 3960
 GATCCTTGGC GGCAAGAAAG CCATCCAGTT TACTTTGCAG GGCTTCCCAA CCTTACCAGA 4020
 GGGCGCCCCA GCTGGCAATT CCGGTTTCGCT TGCTGTCCAT AAAACCGCCC AGTCTAGCTA 4080
 TCGCCATGTA AGCCCACTGC AAGCTACCTG CTTTCTCTTT GCGCTTGCCT TTTCCCTTGT 4140
 CCAGATAGCC CAGTAGCTGA CATTATCCG GGGTCAGCAC CGTTTCTGCG GACTGGCTTT 4200
 CTACGTGTTT CGCTTCCTTT AGCAGCCCTT GCGCCCTGAG TGCTTGCGGC AGCGTG 4256

(2) INFORMATION FOR SEQ ID NO:22:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 112 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

AAGCTTAAAA AACTGCAAAA AATAGTTTGA CTTGTGAGCG GATAACAATT AAGATGTACC 60
 CAATTGTGAG CGGATAACAA TTTCACACAT TAAAGAGGAG AAATTACATA TG 112

(2) INFORMATION FOR SEQ ID NO:23:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 45 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys
 35 40 45

(2) INFORMATION FOR SEQ ID NO:24:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 46 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly
          35          40          45
```

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 47 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35          40          45
```

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 48 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20          25          30
```

Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 49 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 50 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln
 50

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 51 amino acids
- (B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu
50
```

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 52 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp
50
```

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 53 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val
 50

(2) INFORMATION FOR SEQ ID NO:32:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 54 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln
 50

(2) INFORMATION FOR SEQ ID NO:33:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 55 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45

Lys Gln Glu Trp Val Gln Arg
50 55

(2) INFORMATION FOR SEQ ID NO:34:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 56 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	Asn
1				5					10					15	
Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	Ala
			20					25					30		
Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	Pro
		35				40						45			
Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr								
		50				55									

(2) INFORMATION FOR SEQ ID NO:35:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 57 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	Asn
1				5					10					15	
Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	Ala
			20					25					30		
Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	Pro
		35				40						45			
Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met							
		50				55									

(2) INFORMATION FOR SEQ ID NO:36:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 58 amino acids
 - (B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys
50          55
```

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 59 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn
50          55
```

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 60 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu
 50 55 60

(2) INFORMATION FOR SEQ ID NO:39:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 61 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp
 50 55 60

(2) INFORMATION FOR SEQ ID NO:40:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 62 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala

50

55

60

(2) INFORMATION FOR SEQ ID NO:41:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 63 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	Asn
1				5					10					15	
Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	Ala
			20					25					30		
Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	Pro
		35					40					45			
Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys	
	50					55					60				

(2) INFORMATION FOR SEQ ID NO:42:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 64 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	Asn
1				5					10					15	
Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	Ala
			20					25					30		
Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	Pro
		35					40					45			
Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys	Gln
	50					55					60				

(2) INFORMATION FOR SEQ ID NO:43:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 65 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys
65

```

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys
65

```

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 67 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala
65

```

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 68 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser
65

```

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 69 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1           5           10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20           25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35           40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50           55          60
Lys Lys Ala Ser Pro
          65

```

(2) INFORMATION FOR SEQ ID NO:48:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 70 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1           5           10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20           25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35           40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50           55          60
Lys Lys Ala Ser Pro Arg
          65          70

```

(2) INFORMATION FOR SEQ ID NO:49:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1           5           10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20           25          30

```

Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
 50 55 60
 Lys Lys Ala Ser Pro Arg Ala
 65 70

(2) INFORMATION FOR SEQ ID NO:50:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 72 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
 50 55 60
 Lys Lys Ala Ser Pro Arg Ala Arg
 65 70

(2) INFORMATION FOR SEQ ID NO:51:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 73 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
 1 5 10 15
 Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
 20 25 30
 Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
 35 40 45
 Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
 50 55 60

Lys Lys Ala Ser Pro Arg Ala Arg Ala
65 70

(2) INFORMATION FOR SEQ ID NO:52:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 74 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1 5 10 15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20 25 30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35 40 45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50 55 60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val
65 70

(2) INFORMATION FOR SEQ ID NO:53:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1 5 10 15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20 25 30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35 40 45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50 55 60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala
65 70 75

(2) INFORMATION FOR SEQ ID NO:54:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 76 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val
          65          70          75

```

(2) INFORMATION FOR SEQ ID NO:55:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 77 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys
          65          70          75

```

(2) INFORMATION FOR SEQ ID NO:56:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 78 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly
65          70          75
```

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 79 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro
65          70          75
```

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 80 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	Asn
1			5						10				15		
Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	Ala
			20					25					30		
Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	Pro
		35				40						45			
Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys	Gln
	50					55					60				
Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro	Val
65					70				75					80	

(2) INFORMATION FOR SEQ ID NO:59:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 81 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	Asn
1			5						10				15		
Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	Ala
			20					25					30		
Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	Pro
		35				40						45			
Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys	Gln
	50					55					60				
Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro	Val
65					70				75					80	

Gln

(2) INFORMATION FOR SEQ ID NO:60:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 82 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65          70          75          80
Gln Arg

```

(2) INFORMATION FOR SEQ ID NO:61:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 83 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65          70          75          80
Gln Arg Tyr

```

(2) INFORMATION FOR SEQ ID NO:62:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 84 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1 5 10 15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20 25 30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35 40 45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50 55 60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65 70 75 80
Gln Arg Tyr Pro

(2) INFORMATION FOR SEQ ID NO:63:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 85 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1 5 10 15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20 25 30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35 40 45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50 55 60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65 70 75 80
Gln Arg Tyr Pro Gly
85

(2) INFORMATION FOR SEQ ID NO:64:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 86 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65          70          75          80
Gln Arg Tyr Pro Gly Asn
85
```

(2) INFORMATION FOR SEQ ID NO:65:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 87 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

```
Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1          5          10          15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
20          25          30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
35          40          45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
50          55          60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65          70          75          80
Gln Arg Tyr Pro Gly Asn Gln
85
```

(2) INFORMATION FOR SEQ ID NO:66:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 88 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1           5           10           15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20           25           30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35           40           45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50           55           60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65           70           75           80
Gln Arg Tyr Pro Gly Asn Gln Thr
          85

```

(2) INFORMATION FOR SEQ ID NO:67:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 89 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1           5           10           15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20           25           30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35           40           45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50           55           60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65           70           75           80
Gln Arg Tyr Pro Gly Asn Gln Thr Thr
          85

```

(2) INFORMATION FOR SEQ ID NO:68:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 90 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

```

Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn
1           5           10           15
Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala
          20           25           30
Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro
          35           40           45
Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln
          50           55           60
Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val
65           70           75           80
Gln Arg Tyr Pro Gly Asn Gln Thr Thr Cys
          85           90

```

(2) INFORMATION FOR SEQ ID NO:69:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 46 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys
          35           40           45

```

(2) INFORMATION FOR SEQ ID NO:70:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 47 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys

```


30

(2) INFORMATION FOR SEQ ID NO:71:

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 49 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			

Pro

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 50 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1          5          10          15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20          25          30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35          40          45
Pro Lys
          50
```

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 51 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1          5          10          15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20          25          30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35          40          45
Pro Lys Gln
          50
```

(2) INFORMATION FOR SEQ ID NO:75:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 52 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1          5          10          15
```

```

Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
      20                      25                      30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
      35                      40                      45
Pro Lys Gln Glu
      50

```

(2) INFORMATION FOR SEQ ID NO:76:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 53 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1              5              10              15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
      20                      25                      30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
      35                      40                      45
Pro Lys Gln Glu Trp
      50

```

(2) INFORMATION FOR SEQ ID NO:77:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 54 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1              5              10              15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
      20                      25                      30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
      35                      40                      45
Pro Lys Gln Glu Trp Val
      50

```

(2) INFORMATION FOR SEQ ID NO:78:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 55 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
			35				40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln									
			50			55									

(2) INFORMATION FOR SEQ ID NO:79:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 56 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
			35				40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg								
			50			55									

(2) INFORMATION FOR SEQ ID NO:80:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 57 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45
Pro Lys Gln Glu Trp Val Gln Arg Tyr
          50           55

```

(2) INFORMATION FOR SEQ ID NO:81:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 58 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met
          50           55

```

(2) INFORMATION FOR SEQ ID NO:82:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 59 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45

```

Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys
50 55

(2) INFORMATION FOR SEQ ID NO:83:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 60 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1 5 10 15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
20 25 30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn
50 55 60

(2) INFORMATION FOR SEQ ID NO:84:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 61 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1 5 10 15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
20 25 30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu
50 55 60

(2) INFORMATION FOR SEQ ID NO:85:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 62 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp
          50           55           60
```

(2) INFORMATION FOR SEQ ID NO:86:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 63 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp, Ala
          50           55           60
```

(2) INFORMATION FOR SEQ ID NO:87:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 64 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15
```

Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				

(2) INFORMATION FOR SEQ ID NO:88:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 65 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln															
65															

(2) INFORMATION FOR SEQ ID NO:89:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 66 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			

Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
50 55 60

Gln Lys
65

(2) INFORMATION FOR SEQ ID NO:90:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 67 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1 5 10 15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
20 25 30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
50 55 60
Gln Lys Lys
65

(2) INFORMATION FOR SEQ ID NO:91:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 68 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1 5 10 15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
20 25 30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
50 55 60
Gln Lys Lys Ala
65

(2) INFORMATION FOR SEQ ID NO:92:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 69 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1          5          10          15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20          25          30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35          40          45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
          50          55          60
Gln Lys Lys Ala Ser
65
```

(2) INFORMATION FOR SEQ ID NO:93:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 70 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

```
Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1          5          10          15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20          25          30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35          40          45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
          50          55          60
Gln Lys Lys Ala Ser Pro
65          70
```

(2) INFORMATION FOR SEQ ID NO:94:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 71 amino acids

(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg									
65					70										

(2) INFORMATION FOR SEQ ID NO:95:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 72 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala								
65					70										

(2) INFORMATION FOR SEQ ID NO:96:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 73 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg							
65						70									

(2) INFORMATION FOR SEQ ID NO:97:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 74 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala						
65						70									

(2) INFORMATION FOR SEQ ID NO:98:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 75 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15

Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30

Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45

Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
          50           55           60

Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val
65           70           75

```

(2) INFORMATION FOR SEQ ID NO:99:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 76 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15

Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30

Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
          35           40           45

Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
          50           55           60

Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala
65           70           75

```

(2) INFORMATION FOR SEQ ID NO:100:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 77 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

```

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1           5           10           15

Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
          20           25           30

```

Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
50 55 60
Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val
65 70 75

(2) INFORMATION FOR SEQ ID NO:101:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 78 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1 5 10 15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
20 25 30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
50 55 60
Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys
65 70 75

(2) INFORMATION FOR SEQ ID NO:102:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 79 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
1 5 10 15
Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
20 25 30
Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
35 40 45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys

50	55	60
Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly		
65	70	75

(2) INFORMATION FOR SEQ ID NO:103:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 80 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro
65				70						75				80	

(2) INFORMATION FOR SEQ ID NO:104:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 81 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro
65				70						75				80	

Val

(2) INFORMATION FOR SEQ ID NO:105:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	
1				5					10					15		
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	
			20					25					30			
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	
		35					40					45				
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys	
	50					55					60					
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro	
65					70					75					80	
Val	Gln															

(2) INFORMATION FOR SEQ ID NO:106:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 83 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu	
1				5					10					15		
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys	
			20					25					30			
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp	
		35					40					45				
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys	
	50					55					60					
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro	
65					70					75					80	

Val Gln Arg

(2) INFORMATION FOR SEQ ID NO:107:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 84 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
		50				55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro
65				70					75					80	
Val Gln Arg Tyr															

(2) INFORMATION FOR SEQ ID NO:108:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 85 amino acids
 - (B) TYPE: amino acid
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
		50				55					60				

Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro
 65 70 75 80
 Val Gln Arg Tyr Pro
 85

(2) INFORMATION FOR SEQ ID NO:109:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 86 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
 1 5 10 15
 Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
 20 25 30
 Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
 35 40 45
 Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
 50 55 60
 Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro
 65 70 75 80
 Val Gln Arg Tyr Pro Gly
 85

(2) INFORMATION FOR SEQ ID NO:110:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 87 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
 1 5 10 15
 Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
 20 25 30
 Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
 35 40 45
 Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys

50	55	60
Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro		
65	70	75 80
Val Gln Arg Tyr Pro Gly Asn		
85		

(2) INFORMATION FOR SEQ ID NO:111:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 88 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			
Pro	Lys	Gln	Glu	Trp	Val	Gln	Arg	Tyr	Met	Lys	Asn	Leu	Asp	Ala	Lys
	50					55					60				
Gln	Lys	Lys	Ala	Ser	Pro	Arg	Ala	Arg	Ala	Val	Ala	Val	Lys	Gly	Pro
65				70						75				80	
Val	Gln	Arg	Tyr	Pro	Gly	Asn	Gln								
				85											

(2) INFORMATION FOR SEQ ID NO:112:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 89 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

Met	Pro	Ser	Pro	Cys	Cys	Met	Phe	Phe	Val	Ser	Lys	Arg	Ile	Pro	Glu
1				5					10					15	
Asn	Arg	Val	Val	Ser	Tyr	Gln	Leu	Ser	Ser	Arg	Ser	Thr	Cys	Leu	Lys
			20					25					30		
Ala	Gly	Val	Ile	Phe	Thr	Thr	Lys	Lys	Gly	Gln	Gln	Phe	Cys	Gly	Asp
		35					40					45			

Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
 50 55 60

Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro
 65 70 75 80

Val Gln Arg Tyr Pro Gly Asn Gln Thr
 85

(2) INFORMATION FOR SEQ ID NO:113:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 90 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
 1 5 10 15

Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
 20 25 30

Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp
 35 40 45

Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys
 50 55 60

Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro
 65 70 75 80

Val Gln Arg Tyr Pro Gly Asn Gln Thr Thr
 85 90

(2) INFORMATION FOR SEQ ID NO:114:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 91 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:114:

Met Pro Ser Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu
 1 5 10 15

Asn Arg Val Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys
 20 25 30

Ala Gly Val Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp

35	40	45
Pro Lys Gln Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys		
50	55	60
Gln Lys Lys Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro		
65	70	75
Val Gln Arg Tyr Pro Gly Asn Gln Thr Thr Cys		
85	90	

100
90
80
70
60
50
40
30
20
10
0